time delay to CCU admission are also associated with a higher incidence of this mechanical complication.

1057-127 Lack of Progress in Cardiogenic Shock: Lessons From the GUSTO Trials

V. Menon, J.S. Hochman, D.R. Holmes, Jr., E.R. Bates, R.D. Anderson, R.M. Califf, E.J. Topol, E. Magnus. *Ohman for the GUSTO - III Investigators; St. Luke's-Roosevelt Hospital Center, Columbia University, New York, NY, USA*

We evaluated the incidence, procedure utilization and outcomes of patients with cardiogenic shock (CS) in GUSTO-III (1995–97) and GUSTO-1 (1990–93) in an analysis restricted to countries that participated in both. The 695 (5.5%) patients with CS in GUSTO-III were older (69 ± 11.7 v 67 ± 11.1 yrs, p = 0.0001) than the 2972 patients (7.2%) in GUSTO-1 with more diabetes (23 v 19%, p = 0.015) and hypertension (48 v 44%, p = 0.02). Prior CABG (5.2% v 6.5%), prior MI (28 v 25%), prior PTCA (4.3 v 3.5%) entry diastolic BP (71.3 ± 18.5 v 71.6 ± 17.1 mm) and HR (83.6 ± 23.5 v 82.1 ± 22.1) were comparable. GUSTO-III patients were more likely to have an index anterior infarction (60 v 51%, p = 0.00002) with increased entry systolic BP (119 ± 28 v 115.3 ± 27 mm, p = 0.0004) and had less left (39 v 46%, p = 0.002) and right (29 v 44%, p = 0.0000001) heart catheterization and less ventilatory support (41 v 48%, p = 0.0004). Despite similar rates of PTCA (19 v 19%), CABG (11 v 12%), and IABP (24 v 25%), mortality (62 v 55%, p = 0.002), reinfarction (14 v 10%, p = 0.012) and recurrent ischemia (35 v 26%, p = 0.00001) in GUSTO-III were significantly higher. Mean LOS in survivors was 11.2 ± 9.3 days in GUSTO-III vs 17.7 ± 12.5 (p < 0.001) in GUSTO-1.

Conclusion: Increased age and more anterior infarction may have contributed to increased mortality and morbidity in GUSTO-III. Overall mortality for CS with acute MI in large clinical thrombolytic trials has not decreased over the last seven years.

1057-128 Correlation of Clinical and Hemodynamic Findings and Outcome in Cardiogenic Shock

V. Menon, L.A. Sleeper, D. Hart, J. Webb, J.S. Hochman. *For the SHOCK investigators; Saint Luke's-Roosevelt Hospital Center, New York, NY, USA*

As Cardiogenic Shock (CS) constitutes a spectrum of LV failure we correlated clinical findings and hemodynamic function in a subset of 337 patients in the SHOCK Registry with suspected predominant LV CS following acute MI. Clinically, 7 patients had no pulmonary congestion (PC) or hypoperfusion (HP) (grp1), 13 had isolated PC (grp2), 90 had isolated end organ HP (grp3) and 227 had HP with PC (grp4). 86% Grp1, 85% Grp2, 59% Grp3 and 62% Grp4 patients had Swan Ganz Catheterization. Grp 3 v grp4: mean PCWP was 19.7 ± 6.7 vs 25.2 ± 8.5 mm (p = 0.001), Cardiac Index 1.9 ± 0.6 vs 2.1 ± 0.7, (p = 0.095), lowest systolic BP was 62.7 ± 23 vs 69.4 ± 17 mm, p = 0.006 and HR 90.9 ± 27 v 96.8 ± 26, (p = 0.08). We compared grps 3 & 4 by univariate analysis and found similar age (68.3 ± 11.8 v 69.7 ± 10.8 yrs), thrombolytic eligibility (53.3 v 49.8%), cigarette smoking (54.8 v 58.2%), and use of IABP (54.4 v 53.7%), angiography (60.0 v 63.9%), PTCA (35.6 v 28.6%) and CABG (13.3 v 16.3%). Mortality was higher in grp 3 (68.9 v 59.5%, p = 0.125) despite less prior MI (35.4 v 48.6%, p = 0.048), diabetes (19.8 v 33.8%, p = 0.018) and CHF (12.2 v 26.7%, p = 0.008). After adjustment for these variables, grp 4 mortality was significantly lower: Odds ratio 0.49, 95% CI (0.27, 0.89), p = 0.019 despite receiving similar treatment.

Conclusion: The clinical subset with hypoperfusion and no pulmonary congestion constitutes a major cohort of CS and is associated with significantly higher mortality. The explanation for this requires further investigation.

1057-129 Risk of Mortality Among Survivors of In-hospital Ventricular Fibrillation After Myocardial Infarction Is Highly Time Dependent

G.V.H. Jensen, L. Kober, C. Torp-Pedersen. *On behalf of the Trace study group, Dept. of Cardiology, Hvidovre University Hospital, Dept. of Cardiology, Gentofte University Hospital, Copenhagen, Denmark*

Background: The aim of this study was to examine how long time after Acute Myocardial Infarction (AMI) Ventricular Fibrillation (VF) is a valid prognostic factor, since this could be important for timing of intervention.

Methods: 6676 patients with enzyme verified MI were screened consecutively for the Trandolapril Cardiac Evaluation Study (TRACE) from 1990–1992 in 27 Danish centres. Complications during hospital stay were registered prospectively for all patients and survival information was obtained from the Danish Central Personal Registry July 15th 1994.

Results: 6364 patients survived 96 hours after AMI. Among these 414 had VF in hospital. Patients with late VF ≥ 48 h after AMI had an 30 days mortality on 73% comparing with 26% among patients with early VF < 48 h after AMI. Among survivors 96 hours after AMI we analysed the importance of VF with inclusion of the following confounding risk factors: age, gender, history of hypertension, heart failure, atrial fibrillation, wall motion index, infarct size, infarct location and effect of thrombolysis in Cox-models. Relative risk (RR = hazard ratio) of VF for prediction of mortality between 5–10 days after AMI, 10–20 days after AMI and 20–30 days after AMI or later (up to 4 years) were estimated:

	n # VF	Hazard ratio (95% KI) 5–10 days after AMI	Hazard ratio (95% KI) 11–20 days after AMI	Hazard ratio (95% KI) 21–30 days after AMI	Hazard ratio (95% KI) >30 days after AMI
VF	414	3.6 (2.6–5.0)**	5.4 (3.6–7.8)**	1.5 (0.7–3.1) ns	1.1 (0.9–1.4) ns
Early VF	208	1.9 (1.1–3.1)*	2.1 (1.1–3.8)*	0.9 (0.3–2.5) ns	1.1 (0.8–1.4) ns
Late VF	110	6.5 (4.5–9.5)**	14.2 (9.4–21.5)**	4.3 (1.5–11.8)*	1.1 (0.7–1.8) ns
Primary VF	153	7.4 (4.2–13.2)**	9.2 (4.2–18.2)**	0.9 (0.1–6.9) ns	1.4 (0.8–2.4) ns
Secondary VF	261	2.8 (1.9–4.0)**	4.6 (3.0–6.9)**	1.7 (0.8–3.7) ns	1.0 (0.8–1.3) ns

*p < 0.05, **p < 0.0001, ns non-significant

Conclusion: VF, early or late, primary or secondary to congestive heart failure did not affect prognosis of survivors longer than 30 days after infarction in the Trace screening population. Since any intervention have the best chance to minimize an *elevated risk*, interventions based on survival after VF should probably therefore take place early after the event.

1057-130 Incidence and Short-term Prognosis of Late Sustained Ventricular Tachycardia After Myocardial Infarction. Results From GISSI-3 Database

A. Volpi, A. Cavalli, R. Turato, S. Barlera, E. Santoro, E. Negri. *On behalf of GISSI-3 Investigators; ANMCO and M. Negri Institute, Florence and Milan, Italy*

Background: There is scanty information from large multicenter databases regarding the incidence and prognosis of late sustained ventricular tachycardia (LSVT) after myocardial infarction (MI).

Methods: The incidence and short-term prognosis of LSVT (>30 sec at a rate of ≥120 beats/min) was evaluated in 16,842 GISSI-3 patients with a definite MI.

Results: The incidence rate of LSVT (time window: >48 h to 6 weeks) was 0.9%. Older age, delayed admission to CCU, a history of hypertension, diabetes and MI, non administration of lytic therapy, Killip class >I, ≥6 leads with ST elevation, higher heart rate and bundle branch block on admission were significantly more frequent among patients with than without LSVT. Patients with LSVT had a significant excess of left ventricular failure, cardiogenic shock, persistent hypotension, atrial flutter-fibrillation, asystole, heart block and recurrent ischemia. Death rates by 6 weeks were 34.7% for patients with LSVT and 4.7% for those without the arrhythmia. On logistic regression analysis adjusting for the main clinical and epidemiological variables LSVT was retained as an independent predictor of 6-week mortality (RR 6.13; 95% CI 4.56–8.25).

Conclusion: 1) A low incidence of LSVT was observed in the GISSI-3 population; 2) the arrhythmia is a strong independent predictor of short-term mortality after MI.

1058 Advanced Diagnostic Testing in Acute Myocardial Infarction

Monday, March 30, 1998, 3:00 p.m.–5:00 p.m.
Georgia World Congress Center, West Exhibit Hall Level
Presentation Hour: 4:00 p.m.–5:00 p.m.

1058-149 Ultrasonic Integrated Backscatter Identifies Promptly Effects of Coronary Artery Reperfusion After Acute Myocardial Infarction

H.-U. Stempfle, U. Buchmeier, C. Werner, J. Schopohl, C.E. Angermann, K. Theisen. *University of Munich, Germany*

Background: Early recovery of regional cardiac function after coronary artery revascularization in acute myocardial infarction (AMI) has significant influence on long-term survival. Cyclic variation of integrated backscatter (CVIB) reflects regional myocardial contractile performance which is blunted after arterial occlusion and recovers after reperfusion. The aim of this study was to evaluate whether CVIB can promptly identify beneficial effects of coronary artery revascularization therapy after AMI.

Methods: Ultrasonic 2D-IB-images (LV long & short axis, 2 & 4 chamber view; one cardiac cycle each) were obtained in 14 patients (4 f, 10 m, mean age: 63 ± 11 yrs.) in our intensive care unit 5.2 ± 2.1 hrs. after

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